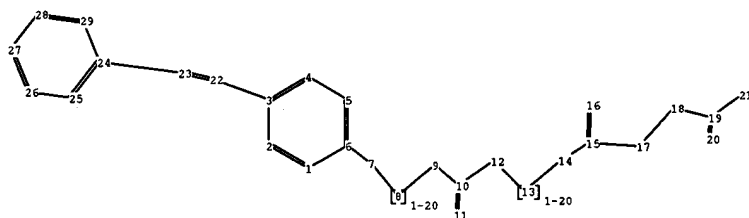
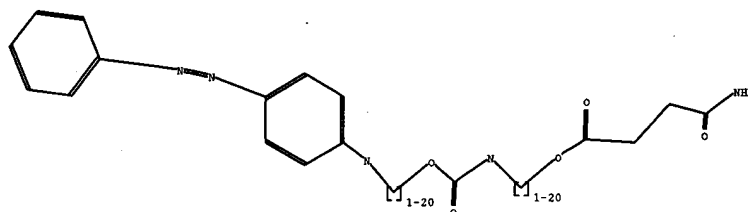


10/606,644.



chain nodes :

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

ring nodes :

1 2 3 4 5 6 24 25 26 27 28 29

chain bonds :

3-22 6-7 7-8 8-9 9-10 10-11 10-12 12-13 13-14 14-15 15-16 15-17 17-18 18-19
19-20 19-21 22-23 23-24

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 24-25 24-29 25-26 26-27 27-28 28-29

exact/norm bonds :

3-22 6-7 7-8 8-9 9-10 10-11 10-12 12-13 13-14 14-15 15-16 19-20 19-21 22-23
23-24

exact bonds :

15-17 17-18 18-19

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 24-25 24-29 25-26 26-27 27-28 28-29

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom
29:Atom

FILE 'HOME' ENTERED AT 09:51:39 ON 07 JUL 2005

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 09:51:50 ON 07 JUL 2005

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STRUCTURE FILE UPDATES: 6 JUL 2005 HIGHEST RN 853990-77-9

DICTIONARY FILE UPDATES: 6 JUL 2005 HIGHEST RN 853990-77-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

*** YOU HAVE NEW MAIL ***

=>

Uploading C:\Program Files\Stnexp\Queries\10606644.str

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=> d his

(FILE 'HOME' ENTERED AT 09:51:39 ON 07 JUL 2005)

FILE 'REGISTRY' ENTERED AT 09:51:50 ON 07 JUL 2005

=> s ll full

L1 NOT FOUND

The L-number entered has not been defined in this session, or it has been deleted. To see the L-numbers currently defined in this session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.86

1.07

FILE 'REGISTRY' ENTERED AT 09:52:53 ON 07 JUL 2005

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STRUCTURE FILE UPDATES: 6 JUL 2005 HIGHEST RN 853990-77-9
DICTIONARY FILE UPDATES: 6 JUL 2005 HIGHEST RN 853990-77-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

*** YOU HAVE NEW MAIL ***

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L1 STRUCTURE UPLOADED

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FULL SEARCH INITIATED 09:53:17 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 13 TO ITERATE

100.0% PROCESSED 13 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L2 0 SEA SSS FUL L1

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L1 HAS NO ANSWERS

L1 STR

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

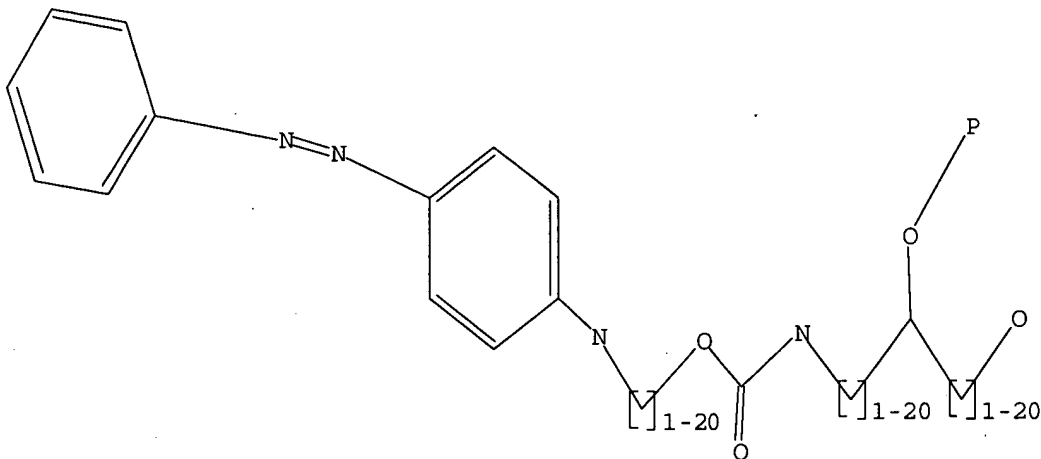
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L3 STRUCTURE UPLOADED

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L3 HAS NO ANSWERS
L3 STR



Structure attributes must be viewed using STN Express query preparation.

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FULL SCREEN SEARCH COMPLETED - 1 TO ITERATE

100.0% PROCESSED 1 ITERATIONS
SEARCH TIME: 00.00.01

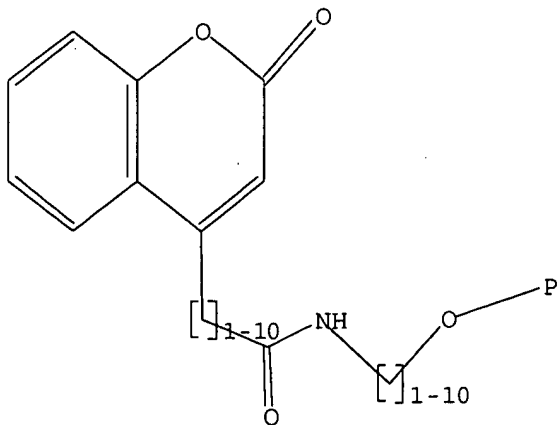
0 ANSWERS

L4 0 SEA SSS FUL L3

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L5 STRUCTURE UPLOADED

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L5 HAS NO ANSWERS
L5 STR



Structure attributes must be viewed using STN Express query preparation.

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FULL SCREEN SEARCH COMPLETED - 38 TO ITERATE

100.0% PROCESSED 38 ITERATIONS 3 ANSWERS
SEARCH TIME: 00.00.01

L6 3 SEA SSS FUL L5

=> file caplus	SINCE FILE	TOTAL
COST IN U.S. DOLLARS	ENTRY	SESSION
FULL ESTIMATED COST	489.58	490.65

FILE 'CAPLUS' ENTERED AT 10:02:33 ON 07 JUL 2005
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FILE COVERS 1907 - 7 Jul 2005 VOL 143 ISS 2
FILE LAST UPDATED: 6 Jul 2005 (20050706/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 16
L7 5 L6

=> dup rem 17
PROCESSING COMPLETED FOR L7
L8 5 DUP REM L7 (0 DUPLICATES REMOVED)

=> d 18 bib abs hitstr 1-5

L8 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:608715 CAPLUS
DN 139:273087
TI Fluorescence energy transfer reveals microdomain formation at physiological temperatures in lipid mixtures modeling the outer leaflet of the plasma membrane
AU Silvius, John R.
CS Department of Biochemistry, McGill University, Montreal, QC, H3G 1Y6, Can.
SO Biophysical Journal (2003), 85(2), 1034-1045
CODEN: BIOJAU; ISSN: 0006-3495
PB Biophysical Society
DT Journal
LA English
AB An approach is described using fluorescence resonance energy transfer (FRET) to detect inhomogeneity in lipid organization, on distance scales of the order of tens of nanometers or greater, in lipid bilayers. This approach compares the efficiency of energy transfer between two matched fluorescent lipid donors, differing in their affinities for ordered vs. disordered regions of the bilayer, and an acceptor lipid that distributes

preferentially into disordered regions. Inhomogeneities in bilayer organization, on spatial scales of tens of nanometers or greater, are detected as a marked difference in the efficiencies of quenching of fluorescence of the two donor species by the acceptor. Using a novel pair of 7-nitrobenz-2-oxa-1,3-diazol-4-yl (NBD)-labeled tetraacyl lipids as donor species with a rhodaminy-labeled acceptor, this strategy faithfully reports homo- vs. inhomogeneous mixing in each of several lipid bilayer systems whose organization on the FRET distance scale can be predicted from previous findings. Interestingly, however, the present FRET method reports clear evidence of inhomogeneity in the organization of mixts. combining sphingomyelin or saturated phospholipids with unsatd. phospholipids and physiol. proportions of cholesterol, even at physiol. temps. where these systems have been reported to appear homogeneous by fluorescence microscopy. These results indicate that under physiol. conditions, lipid mixts. mimicking the lipid composition of the outer leaflet of the plasma membrane can form domains on a spatial scale comparable to that inferred for the dimensions of lipid rafts in biol. membranes.

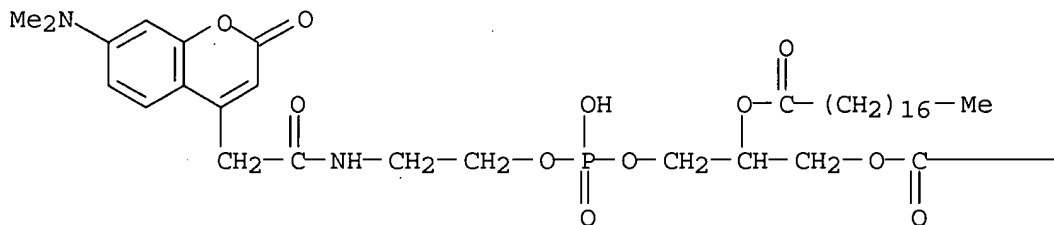
IT 606249-22-3

RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(fluorescence energy transfer reveals microdomain formation at physiol. temps. in lipid mixts. modeling the outer leaflet of plasma membrane)

RN 606249-22-3 CAPLUS

CN Octadecanoic acid, 1-[9-[7-(dimethylamino)-2-oxo-2H-1-benzopyran-4-yl]-3-hydroxy-3-oxido-8-oxo-2,4-dioxa-7-aza-3-phosphanon-1-yl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

— (CH₂)₁₆—Me

RE.CNT 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:946512 CAPLUS

DN 138:20449

TI Oligonucleotide probes containing fluorophores, quenchers, and minor groove binders and their use in hybridization assays

IN Reed, Michael W.; Lukhtanov, Eugeny Alexander; Gall, Alexander A.; Dempcy, Robert O.; Vermeulen, Nicolaas M. J.

PA Epoch Biosciences, Inc., USA

SO PCT Int. Appl., 134 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002099141	A1	20021212	WO 2002-US17787	20020605
	WO 2002099141	C2	20040527		

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 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
 UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,
 GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,
 GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2002034754 A1 20020321 US 2001-876830 20010606
 US 6790945 B2 20040914
 US 2003096254 A1 20030522 US 2002-113445 20020329
 US 2004081959 A9 20040429
 EP 1430147 A1 20040623 EP 2002-737392 20020605

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRAI US 2001-876830 A 20010606
 US 2002-113445 A 20020329
 US 1999-457616 A2 19991208
 WO 2002-US17787 W 20020605

OS MARPAT 138:20449

AB Fluorogenic oligonucleotide probes with quencher structures are provided
 for use in hybridization assays. The probes also can contain a minor
 groove binder. Methods and reagents for synthesizing such probes are
 provided. Thus, oligonucleotides containing fluorescein or TAMRA fluorophore,
 DABCYL, resorufin, coumarin, Red 1, or Red 13 quencher, and a minor groove
 binder were synthesized and characterized. Two such probes were used in a
 PCR assay for detection of a SNP in the RRM1 gene.

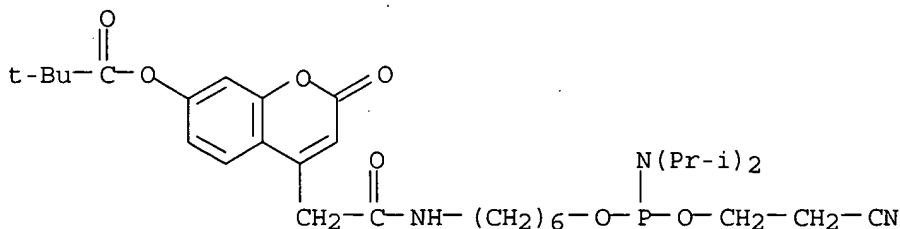
IT 344436-45-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)

(oligonucleotide probes containing fluorophores, quenchers, and minor
 groove binders and their use in hybridization assays)

RN 344436-45-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 4-[11-[bis(1-methylethyl)amino]-14-cyano-2-
 oxo-10,12-dioxo-3-aza-11-phosphatetradec-1-yl]-2-oxo-2H-1-benzopyran-7-yl
 ester (9CI) (CA INDEX NAME)



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:221154 CAPLUS

DN 136:258286

TI Oligonucleotide-quencher-fluorescent dye conjugates and their use in
 nucleic acid hybridization

IN Reed, Michael W.; Lukhtanov, Eugeny Alexander; Gall, Alexander A.; Dempcy,
 Robert O.; Vermeulen, Nicolaas M. J.

PA Epoch Biosciences, Inc., USA

SO U.S. Pat. Appl. Publ., 63 pp., Cont.-in-part of U. S. Ser. No. 457,616.
 CODEN: USXXCO

DT Patent

LA English

FAN.CNT 5

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2002034754	A1	20020321	US 2001-876830	20010606
	US 6790945	B2	20040914		
	US 6727356	B1	20040427	US 1999-457616	19991208
	US 2003008304	A1	20030109	US 2002-84818	20020226
	US 6653473	B2	20031125		
	US 2002155484	A1	20021024	US 2002-93769	20020307
	US 6699975	B2	20040302		
	US 2003096254	A1	20030522	US 2002-113445	20020329
	US 2004081959	A9	20040429		
	WO 2002099141	A1	20021212	WO 2002-US17787	20020605
	WO 2002099141	C2	20040527		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1430147	A1	20040623	EP 2002-737392	20020605
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

US 2003175728	A1	20030918	US 2002-165410	20020606
US 2004191796	A1	20040930	US 2003-606644	20030625

PRAI	US 1999-457616	A2	19991208
	US 2001-876830	A3	20010606
	US 2001-302137P	P	20010629
	US 2002-351637P	P	20020123
	US 2002-93769	A3	20020307
	US 2002-113445	A	20020329
	WO 2002-US17787	W	20020605

OS MARPAT 136:258286

AB The invention relates to oligonucleotide-quencher-fluorescent dye conjugates having improved characteristics, and to reagents suitable for incorporating novel quencher and fluorescent dye moieties into oligonucleotides. The invention also related to the use of oligonucleotide-quencher-fluorescent dye conjugates in detection methods for nucleic acid targets. Thus, a 14-nucleotide probe having a fluorescein moiety at the 5'-terminal and a minor groove binder and phenylazophenyl derivative at the 3'-terminus was prepared and used in SNP detection of RRM1 alleles by PCR.

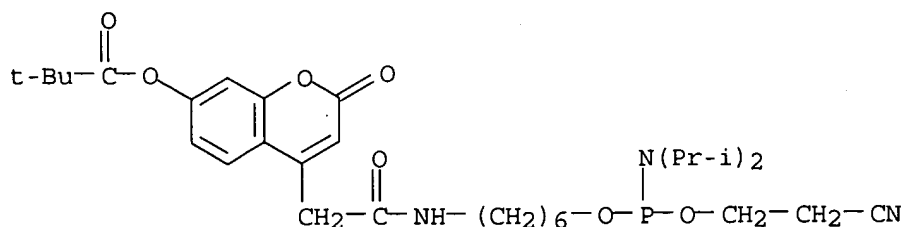
IT **344436-45-9P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(oligonucleotide-quencher-fluorescent dye conjugates and their use in nucleic acid hybridization)

RN 344436-45-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 4-[11-[bis(1-methylethyl)amino]-14-cyano-2-oxo-10,12-dioxo-3-aza-11-phosphatetradec-1-yl]-2-oxo-2H-1-benzopyran-7-yl ester (9CI) (CA INDEX NAME)



RE.CNT 104 THERE ARE 104 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AN 2001:435306 CAPLUS
 DN 135:41772
 TI Fluorophore-oligonucleotide-4-(phenyldiazenyl)phenylamine quencher
 conjugates for use in hybridization assays
 IN Reed, Michael W.; Lukhtanov, Eugeny Alexander; Gall, Alexander A.; Dempcy,
 Robert O.
 PA Epoch Biosciences, Inc., USA
 SO PCT Int. Appl., 122 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN. CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001042505	A2	20010614	WO 2000-US33333	20001208
	WO 2001042505	A3	20020124		
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	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
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	CA 2396795	AA	20010614	CA 2000-2396795	20001208
	EP 1235938	A2	20020904	EP 2000-984069	20001208
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
	JP 2003516163	T2	20030513	JP 2001-544376	20001208
	US 2002155484	A1	20021024	US 2002-93769	20020307
	US 6699975	B2	20040302		
	US 2004191796	A1	20040930	US 2003-606644	20030625
PRAI	US 1999-457616	A	19991208		
	WO 2000-US33333	W	20001208		
	US 2002-93769	A3	20020307		

OS MARPAT 135:41772

AB Oligonucleotide-fluorophore-quencher conjugates wherein the fluorophore moiety has emission wavelengths in the range of about (300) to about (800) nm, and or where the quencher includes a substituted 4-(phenyldiazenyl)phenylamine structure provide improved signal to noise ratios and other advantageous characteristics in hybridization and related assays. The oligonucleotide-fluorophore-quencher conjugates can be synthesized by utilizing novel phosphoramidite reagents that incorporate the quencher moiety based on the substituted 4-(phenyldiazenyl)phenylamine structure, and or novel phosphoramidite reagents that incorporate a fluorophore moiety based on the substituted coumarin, substituted 7-hydroxy-3H-phenoxazin-3-one, or substituted 5,10-dihydro-10-[phenyl]pyrido[2,3-d;6,5-d']dipyrimidine-2,4,6,8-(1H,3H,7H,9H,10H)-tetrone structure. Oligonucleotide-fluorophore-quencher-minor groove binder conjugates including a pyrrolo[4,5-e]indolin-7-yl-carbonyl{pyrrolo[4,5-e]indolin-7-yl}carbonyl pyrrolo[4,5-e]indoline-7-carboxylate (DPI3) moiety as the minor groove binder and the substituted 4-(phenyldiazenyl)phenylamine moiety as the quencher, were synthesized and have substantially improved hybridization and signal to noise ratio properties.

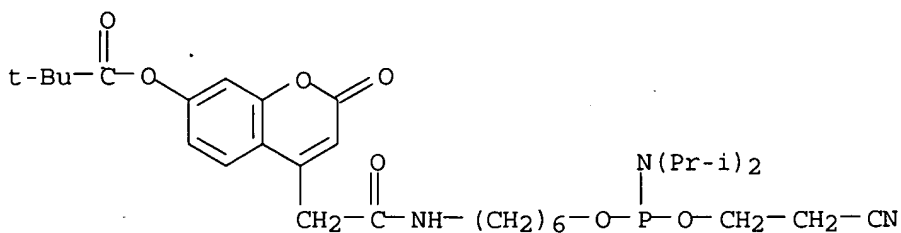
IT 344436-45-9P.

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(fluorophore-oligonucleotide-4-(phenyldiazenyl)phenylamine quencher conjugates for use in hybridization assays)

RN 344436-45-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 4-[11-[bis(1-methylethyl)amino]-14-cyano-2-oxo-10,12-dioxo-3-aza-11-phosphatetradec-1-yl]-2-oxo-2H-1-benzopyran-7-yl ester (9CI) (CA INDEX NAME)



L8 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:97630 CAPLUS

DN 134:112553

TI Design and synthesis of intramolecular resonance-energy transfer probes for use in ratiometric measurements in aqueous solution

AU Kawanishi, Yasutomo; Kikuchi, Kazuya; Takakusa, Hideo; Mizukami, Shin; Urano, Yasuteru; Higuchi, Tsunehiko; Nagano, Tetsuo

CS Grad. Sch. Pharm. Sci., Univ. Tokyo, Tokyo, 113-0033, Japan

SO Angewandte Chemie, International Edition (2000), 39(19), 3438-3440

CODEN: ACIEF5; ISSN: 1433-7851

PB Wiley-VCH Verlag GmbH

DT Journal

LA English

AB Herein, we present a method to observe the emission of the acceptor caused by intramol. resonance energy transfer (RET), applicable for ratiometric measurements in aqueous solution. This method is based upon the idea that self-quenching between the two fluorophores can be blocked and the emission of the acceptor can be observed by restricting the flexibility of the linker between the two fluorophores, so that they can not readily come into close contact.

IT 321427-62-7P

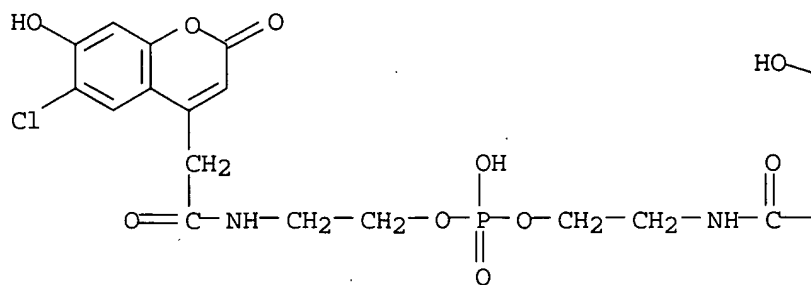
RL: SPN (Synthetic preparation); PREP (Preparation).

(CPF1; design and synthesis of intramol. resonance-energy transfer probes for use in ratiometric measurements in aqueous solution)

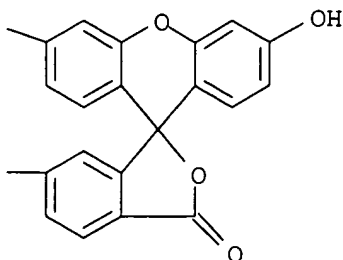
RN 321427-62-7 CAPLUS

CN Phosphoric acid, mono[2-[[[(6-chloro-7-hydroxy-2-oxo-2H-1-benzopyran-4-yl)acetyl]amino]ethyl] mono[2-[[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthen]-6-yl)carbonyl]amino]ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



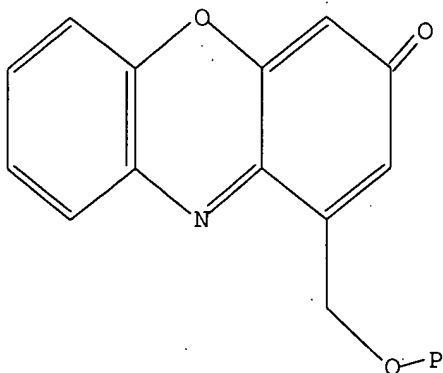
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=>
Uploading C:\Program Files\Stnexp\Queries\106066444.str

L9 STRUCTURE UPLOADED

=> d 19
L9 HAS NO ANSWERS
L9 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 19 full

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 10:06:17 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 277 TO ITERATE

100.0% PROCESSED 277 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

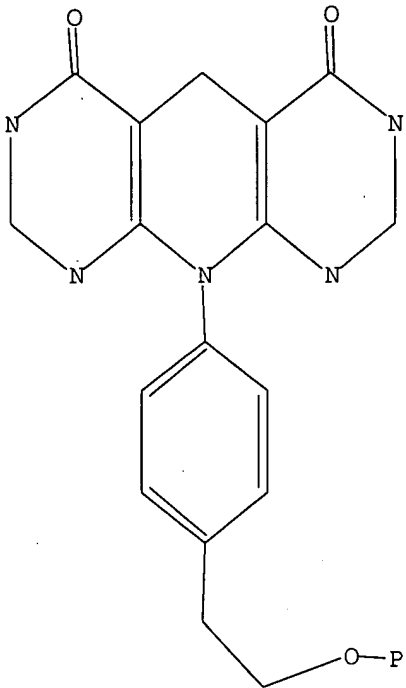
L10 0 SEA SSS FUL L9

L11 0 L10

=>
Uploading C:\Program Files\Stnexp\Queries\106066445.str

L14 STRUCTURE UPLOADED

=> d l14
L14 HAS NO ANSWERS
L14 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l14 full

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 10:09:30 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 333 TO ITERATE

100.0% PROCESSED 333 ITERATIONS
SEARCH TIME: 00.00.01

2 ANSWERS

L15 2 SEA SSS FUL L14

L16 3 L15

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.45	1005.19

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION

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FILE LAST UPDATED: 6 Jul 2005 (20050706/ED)

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=> s l16

L17 3 L15

=> dup rem l17

PROCESSING COMPLETED FOR L17

L18 3 DUP REM L17 (0 DUPLICATES REMOVED)

=> d l18 bib abs 1-3

L18 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:946512 CAPLUS

DN 138:20449

TI Oligonucleotide probes containing fluorophores, quenchers, and minor groove binders and their use in hybridization assays

IN Reed, Michael W.; Lukhtanov, Eugeny Alexander; Gall, Alexander A.; Dempcy, Robert O.; Vermeulen, Nicolaas M. J.

PA Epoch Biosciences, Inc., USA

SO PCT Int. Appl., 134 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002099141	A1	20021212	WO 2002-US17787	20020605
	WO 2002099141	C2	20040527		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	US 2002034754	A1	20020321	US 2001-876830	20010606
	US 6790945	B2	20040914		
	US 2003096254	A1	20030522	US 2002-113445	20020329
	US 2004081959	A9	20040429		

EP 1430147 A1 20040623 EP 2002-737392 20020605
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRAI US 2001-876830 A 20010606
US 2002-113445 A 20020329
US 1999-457616 A2 19991208
WO 2002-US17787 W 20020605

OS MARPAT 138:20449

AB Fluorogenic oligonucleotide probes with quencher structures are provided for use in hybridization assays. The probes also can contain a minor groove binder. Methods and reagents for synthesizing such probes are provided. Thus, oligonucleotides containing fluorescein or TAMRA fluorophore, DABCYL, resorufin, coumarin, Red 1, or Red 13 quencher, and a minor groove binder were synthesized and characterized. Two such probes were used in a PCR assay for detection of a SNP in the RRM1 gene.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:221154 CAPLUS

DN 136:258286

TI Oligonucleotide-quencher-fluorescent dye conjugates and their use in nucleic acid hybridization

IN Reed, Michael W.; Lukhtanov, Eugeny Alexander; Gall, Alexander A.; Dempcy, Robert O.; Vermeulen, Nicolaas M. J.

PA Epoch Biosciences, Inc., USA

SO U.S. Pat. Appl. Publ., 63 pp., Cont.-in-part of U. S. Ser. No. 457,616.
CODEN: USXXCO

DT Patent

LA English

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002034754	A1	20020321	US 2001-876830	20010606
	US 6790945	B2	20040914		
	US 6727356	B1	20040427	US 1999-457616	19991208
	US 2003008304	A1	20030109	US 2002-84818	20020226
	US 6653473	B2	20031125		
	US 2002155484	A1	20021024	US 2002-93769	20020307
	US 6699975	B2	20040302		
	US 2003096254	A1	20030522	US 2002-113445	20020329
	US 2004081959	A9	20040429		
	WO 2002099141	A1	20021212	WO 2002-US17787	20020605
	WO 2002099141	C2	20040527		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1430147 A1 20040623 EP 2002-737392 20020605
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

US 2003175728 A1 20030918 US 2002-165410 20020606
US 2004191796 A1 20040930 US 2003-606644 20030625
PRAI US 1999-457616 A2 19991208
US 2001-876830 A3 20010606
US 2001-302137P P 20010629
US 2002-351637P P 20020123
US 2002-93769 A3 20020307
US 2002-113445 A 20020329
WO 2002-US17787 W 20020605

OS MARPAT 136:258286

AB The invention relates to oligonucleotide-quencher-fluorescent dye

conjugates having improved characteristics, and to reagents suitable for incorporating novel quencher and fluorescent dye moieties into oligonucleotides. The invention also related to the use of oligonucleotide-quencher-fluorescent dye conjugates in detection methods for nucleic acid targets. Thus, a 14-nucleotide probe having a fluorescein moiety at the 5'-terminal and a minor groove binder and phenylazophenyl derivative at the 3'-terminus was prepared and used in SNP detection of RRM1 alleles by PCR.

RE.CNT 104 THERE ARE 104 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:435306 CAPLUS

DN 135:41772

TI Fluorophore-oligonucleotide-4-(phenyldiazenyl)phenylamine quencher conjugates for use in hybridization assays

IN Reed, Michael W.; Lukhtanov, Eugeny Alexander; Gall, Alexander A.; Dempcy, Robert O.

PA Epoch Biosciences, Inc., USA

SO PCT Int. Appl., 122 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001042505	A2	20010614	WO 2000-US33333	20001208
	WO 2001042505	A3	20020124		
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	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	US 6727356	B1	20040427	US 1999-457616	19991208
	CA 2396795	AA	20010614	CA 2000-2396795	20001208
	EP 1235938	A2	20020904	EP 2000-984069	20001208
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
	JP 2003516163	T2	20030513	JP 2001-544376	20001208
	US 2002155484	A1	20021024	US 2002-93769	20020307
	US 6699975	B2	20040302		
	US 2004191796	A1	20040930	US 2003-606644	20030625
PRAI	US 1999-457616	A	19991208		
	WO 2000-US33333	W	20001208		
	US 2002-93769	A3	20020307		

OS MARPAT 135:41772

AB Oligonucleotide-fluorophore-quencher conjugates wherein the fluorophore moiety has emission wavelengths in the range of about (300) to about (800) nm, and or where the quencher includes a substituted 4-(phenyldiazenyl)phenylamine structure provide improved signal to noise ratios and other advantageous characteristics in hybridization and related assays. The oligonucleotide-fluorophore-quencher conjugates can be synthesized by utilizing novel phosphoramidite reagents that incorporate the quencher moiety based on the substituted 4-(phenyldiazenyl)phenylamine structure, and or novel phosphoramidite reagents that incorporate a fluorophore moiety based on the substituted coumarin, substituted 7-hydroxy-3H-phenoxazin-3-one, or substituted 5,10-dihydro-10-[phenyl]pyrido[2,3-d;6,5-d']dipyrimidine-2,4,6,8-(1H,3H,7H,9H,10H)-tetrone structure. Oligonucleotide-fluorophore-quencher-minor groove binder conjugates including a pyrrolo[4,5-e]indolin-7-yl-carbonyl{pyrrolo[4,5-e]indolin-7-yl}carbonyl pyrrolo[4,5-e]indoline-7-carboxylate (DPI3) moiety as the minor groove binder and the substituted 4-(phenyldiazenyl)phenylamine moiety as the quencher, were synthesized and have substantially improved hybridization and signal to noise ratio

properties.

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